

```

yiaX2  MNITSNSTTKD--IPRQRWLRIIPPILITCIISYMDRVNIAFAMPGGMDA
prmA   MQ-----KSQPGTRWFRRIIVPILIACIMSFMDRVNISFALPGGMEQ
PE6    MNTASVSVTQSQAIPKLRWLRIVPPILITCIISYMDRVNIAFAMPGGMDD
PK1    MNSST-----N-ATKRWWYIMPIVFITYSLAYLDRANFSFASAAGITE
prmB   MNTSR-----KLPVKRWWYLMPIVFITYSLAYLDRANYGFAAASGIEA
PE1    MNSST-----N-ATKRWWYIMPIVFITYSLAYLDRANFSFASAAGITE
      * . . . . . ** . . . . . * . . . . .

yiaX2  DLGISATMAGLAGGIFFIGYLFLOVPGGKIAVHGS GKKFIGWSLVAWAVI
prmA   DLLMSSQMAGVVS GIFFIGYLFLOVPGGHIAVRGSGKR FIAWSLVAWAVV
PE6    ELGITASMAGLAGGIFFIGYLFLOVPGGKLAVYGNGKKFIGWSLLAWAVI
PK1    DLGITKGISSLLGALFFLGYFFFQIPGAIYAERRSVRKLIFICLILWGAC
prmB   DLGISRGTSLLIGALFFLGYFIFQVPGAIYAVKRSVRKLVFTSLLLWGFC
PE1    DLGITKGISSLLGALFFLGYFFFQIPGAIYAERRSVRKLIFICLILWGAC
      * . . . . . ** . . . . . * . . . . .

yiaX2  SVLT-GLITNQYQLLALRFLLGVAEGGMLPVVLTMTISNWF PDAERGRANA
prmA   SVAT-GFVTHQYQLLILRFALGVSEGGMLPVVLTMTVSNWF PEKELGRANA
PE6    SVLT-GLVTNQYQLLFLRFALGRFRSGMLRWVLTMTISNWF PDKERGRANA
PK1    ASLDRDGAQYSRAGRAIRFILGVVEAAVMPAMLIYISNWF TKRSERSRANT
prmB   AA-ATGLISNIPALMVIRFVLGVVEAAVMPAMLIYISNWF TRQERSRANT
PE1    ASLDRDGAQYSSAGWRSVLFSAVVEAAVMPAMLIYISNWF TKRSERSRANT
      . . . . . * . . . . . * . . . . .

yiaX2  IVIMFVPIAGIITAPLSGWIIITVLDWRWLFII EGLLSLVVLVLWAYTTIYD
prmA   FVMMFAPLGGMITAPVSGWIIIALLDWRWLFII EGLLSVVVLAVWWLMVSD
PE6    IVIMFVPIAGILTAPLSGWIIITAWDWRMLFLVEGALS LVVMVLWYFTISN
PK1    FLILGNPVTVLWMSVVS GYLIQAFGWREMFIIEGVPAVIWAF CWWVLVKD
prmB   FLVLGNPVTVLWMSIVS GYLINAFGWREMFIIEGVPALIWAIF WWFIVRD
PE1    FLILGNPVTVLWMSVVS GYLIQSFGWREMFIIEGVPAVLWAF CWWVLVKV
      . . . . . * . . . . . ** . * . . . . ** . * . . . . *

yiaX2  RPQEARWISEAEKRYLVETLAAEQKAIAG-TEVKNASLSAVLSDKTMWQL
prmA   RPEDARWLPAAEREYLLREMARDKAERSKLPPISHAPLQEV FHNPGMLMKL
PE6    RPQEAKRISQA EKDYLIKTLHDEQLLIK G-KTVRNASLRRVLGD KIMWK-
PK1    KPSQVNWLAESEKAALQEQLEREQQGIKPVRNYGEA-----FRSRNVVLL
prmB   KPEQVSWLTETEKQQLASAMAE EQQAIPPMRNV PQA-----LRSRNVVVL
PE1    KPSQVNWLS ENEKAALQAQLESEQQGIKAVRNYGEA-----FRSRNVILL
      * . . . . * . * . . . . * . . . .

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FIG. 1A

yiaX2	IALNFFYQTGIYGYTLWLPTILKELTHS-SMGQVGMLAILPYVGAIAGMF
prmA	VILNFFYQTGDYGYTLWLPTI IKNLTGA-SIGNVGLLTVLPFIATLSGIY
PE6	----FFYQTGIYGYTLWLPTILKGLTNG-NMEQVGMLAILPYIGAI FGML
PK1	CMQYFAWSIGVYGFVLWLPSIIRSGGENMGMVEVGWLSSVPYLAATIAMI
prmB	CLLHALWSIGVYGFMMWMP SILRSAA-SMDIVRVGWLA AVPYLA AIITML
PE1	CMQYFAWSIGVYGFVLWLPSIIRSGGVNMGMVEVGWLSSVPYLAATIAMI
	* ** . . * . * * * * . . *
yiaX2	LFSSLSDRTGKRKLFV-CLPLIGFALCMFLSVALKNQIWLSYAALVGCGF
prmA	VVSYLSDKTGKRRQWV-MISLFCFAACLLASVLLREFVLAAYLALVACGF
PE6	IISTLSDRGTGKRKFV-ALPLACFAICMALS VLLKDHIWWSYAALVGCGV
PK1	VVSWASDKMQNRKLFVWPLLLI AVFAFIGSWAVGANLSWVSYTLLVIAGA
prmB	VISWLSDKTGLRRLFIWPLLLI ASVTFFGSWLLGSYSFWFSYGLLVLA
PE1	VVSWASDKMQNRKLFVWPLLLI GGLAFIGSWAVGANHFWASYTLLVIANA
	. * ** . * . . . * . . * * .
yiaX2	FLQSAAGVFWTIPARLFS AEMAGGARGVINALGNLGGFCGPYAVGV LITL
prmA	FLKAATSPFWSIPGRIAPPEAAGSARGVINGLGNLGGFCGPWL VGLMIYL
PE6	FTQAAAGVFWTIPPKLFNAEMAGGARGVINALGNLGGFCGPY MVGV LITL
PK1	AMYAPYGPFFAI IPEMLPRNVAGGAMALINSMGALGSFFGSWFVGYLNGT
prmB	CMYAPYGPFFALIPELLPKNVAGISIGLINCCGALGAFAGAWLVGYLNGL
PE1	AMYAPYGPFFAI IPEMLPRNVAGGAMALINSMGALGSFFGSWFVGYLNGT
	. . . * * * . . * * * * * . * * .
yiaX2	YSKDAGVYC-LAISLALAA LMA LLPAKCDAGAAPVK--TINPHKRTA-
prmA	YGQNAAVVT-LAGSLIIAGIIAALLPTQCDLRPAEARQONFTPRIHDAK
PE6	FSKDVGVS-LAVSLASASVLALMLPNRCDQKAGA-----E-
PK1	TGSPSASYIFMGVALFVSVWLT LIVKPA---NNQKLP---LGAR---HA
prmB	TGGPGASYTFMAIALLVSVGLVFFLKVP---SGNLVTRRLLKGD---AK
PE1	TGSPSASYIFMGVALFASVWLT LIVKPA---NNQKLP---IGAR---HA
 *

FIG. 1B

00522660 "080E0T"

Fermentative Production of 2-KLG

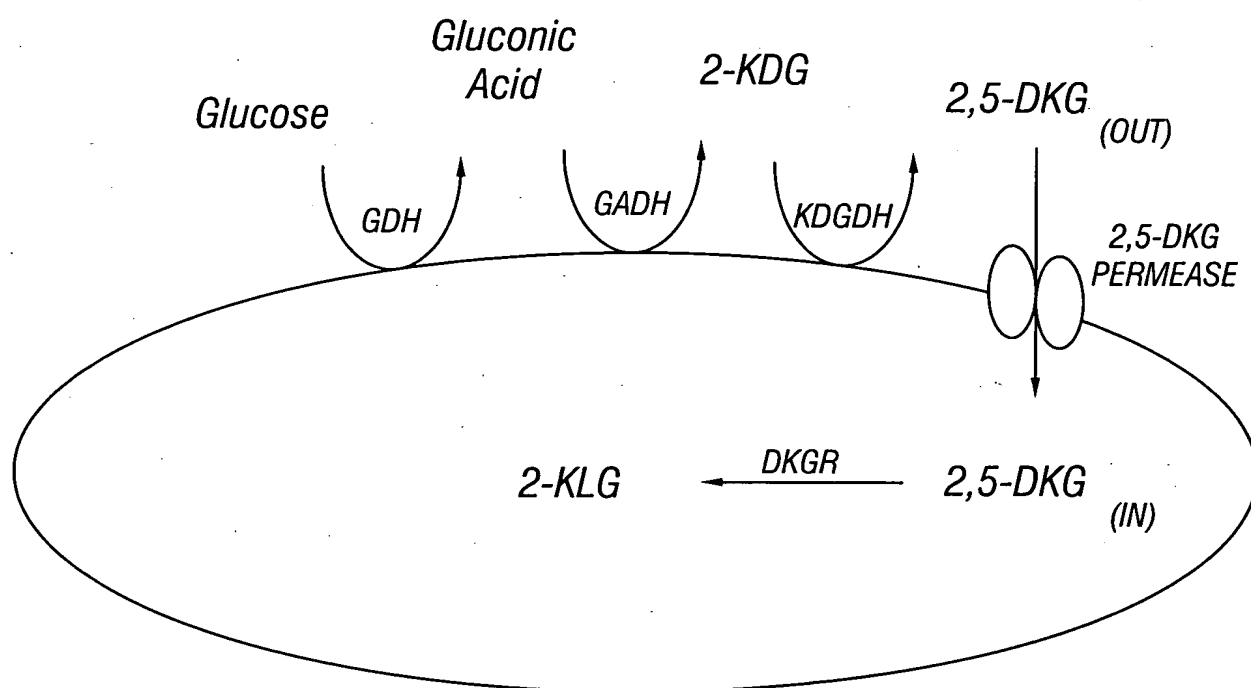


FIG. 2

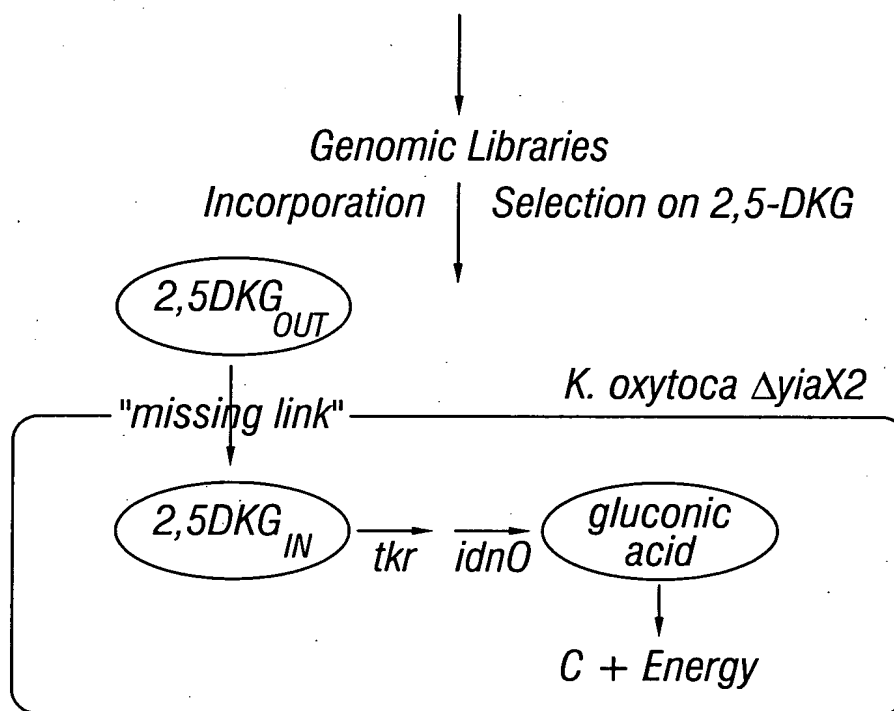


FIG. 3